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		E-mail	jayclee@sogang.ac.kr
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1.

(Micro Electro Mechanical Systems; MEMS)

Smart Materials

piezoelectric, piezoresistive, shape memory alloys (SMA)

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Chang Liu, Foundation of MEMS, Pearson Prentice Hall, 2006

1. Tai-Ran Hsu, MEMS, MICROSYSTEMS Design and Manufacture, McGraw-Hill

2. S.D. Senturia, Microsystem Design, Kluwer Academic Publishers

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1	Introduction to MEMS	LECTURE	
2	Essential electrical and mechanical concepts 1	LECTURE	
3	Essential electrical and mechanical concepts 2	LECTURE	
4	Electrostatic sensing and actuation	LECTURE, DISCUSSION	
5	Thermal sensing and actuation	LECTURE, DISCUSSION	
6	Piezoresistive sensors 1	LECTURE, DISCUSSION	
7	Piezoresistive sensors 2	LECTURE, DISCUSSION	
8	Mid-term Exam	EXAM	

9	Piezoelectric sensing and actuation	LECTURE, DISCUSSION	
10	Bulk micromachining process 1	LECTURE, DISCUSSION	
11	Bulk micromachining process 2	LECTURE, DISCUSSION	
12	Surface micromachining process 1	LECTURE, DISCUSSION	
13	Surface micromachining process 2	LECTURE, DISCUSSION	
14	High aspect ration MEMS	LECTURE	
15	Microsystem packaging	LECTURE	
16	Final Exam	EXAM	

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